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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/453,327	12/02/1999	Sidney A. Heenan	096990-026-127	2473

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EXAMINER

PHAN, JAMES

ART UNIT

PAPER NUMBER

2872

DATE MAILED: 01/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/453,327

Applicant(s)

HEENAN ET AL.

Examiner

James Phan

Art Unit

2872

-- Th MAILING DATE of this communication appears on the cover sheet with the corresponding address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 October 2002.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 and 14-94 is/are pending in the application.
- 4a) Of the above claim(s) 14-17, 19-25, 27, 28 and 31-90 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1-11, 18, 26, 29, 30 and 91-94 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

Art Unit: 2872

DETAILED ACTION

The brief filed 10/8/02 has been fully considered and has overcome the rejections of claims 5 and 6.

Claim Rejections - 35 USC § 102

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

The rejections of claims 1-4, 7-11, 18, 26, 29-30 and 91-94 under 35 U.S.C. 102(b) made in paper no. 20 is repeated.

In Fig. 8 each cell 210 has four square cube corner elements 220 (column 4, lines 8-14); the cell is measured .08 inches in length (column 7, lines 22-23), which corresponds to individual square cube corner element having a side dimension of .04 inches. Therefore, maximum area of the cube corner element is .0016" square (1mm square).

Applicants have traversed the above rejection by arguing that the claims were not anticipated by the Heenan '090 reference because the embodiment of Figs. 10-12 and described at column 10 was not enable by the patent. This argument is not found persuasive because the embodiment of Fig. 8 of the Heenan '090 reference meets the claimed invention.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Heenan '090 in view of the document DE 4236799.

Heenan '090 discloses all claimed features discussed on page 2 except for at least one microcube having a projected area of about 0.35mm square or less (claim5) and about 0.04 – 0.12mm square. However, the claimed areas of a microcube have been known in the art. The document DE 4236799 discloses a method for producing a molding tool with a cubical surface for the production of high-efficiency triple reflectors. The cubical triples of smaller than 1.5 mm, or even only 0.1 mm in diameters can be produced (column 1, lines 58-61; English translation, page 2, third paragraph). When the diameter of the cubical triple is smaller than 1.5 mm, the area is smaller than 2.25 mm square; and when the diameter of the cubical triples is only .1 mm, the area is .01 mm square. Thus, it would have been obvious to one skilled in the art at the time the invention was made to apply the teaching of the document DE 4236799 in Heenan for obtaining retro reflective article having microcubes of particular projected area.

Alternatively, if the teaching in column 10, lines 12-13, was not enable by Heenan patent as argued by the applicants, then it would have been obvious to one skilled in the art at the time the invention was made to use the teaching disclosed in the

Art Unit: 2872

document DE 4236799 for forming cube corner elements disclosed in the embodiment of Figs. 10-12 of the Heenan patent and for further forming cube corner elements of smaller side such as 0.1 mm.

Allowable Subject Matter

Claim 12 is allowed.


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Phan whose telephone number is (703)308-4810. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Cassandra Spyrou can be reached on (703)308-1867. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 308-7722 for regular communications and (703)308-7724 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)308-0956.

Phan, J.
December 30, 2002


James Phan
Primary Examiner